

## CLAIMS

- 1 1. An object-based encoding system for encoding a video image, comprising:  
2       a foreground encoding system for coding a foreground shape in a foreground  
3 object plane;  
4       a padding system that pads a masked area in a background object plane, wherein  
5 the masked area is determined from data associated with the foreground shape; and  
6       a background encoding system for coding the background object plane.
- 1 2. The object-based encoding system of claim 1, wherein the foreground encoding  
2 system utilizes a shape-based encoding scheme.
- 1 3. The object-based encoding system of claim 1, wherein the background encoding  
2 system utilizes a frame-based encoding scheme.
- 1 4. The object-based encoding system of claim 1, wherein the masked area is padded with  
2 zeros when the video image comprises a P or B frame.
- 1 5. The object-based encoding system of claim 1, wherein the masked area is padded with  
2 an average pixel value of the masked area when the video image comprises an I frame.
- 1 6. The object-based encoding system of claim 1, wherein the object based coding system  
2 comprises an MPEG-4 encoder.

1 7. A method of encoding a video image in an object-based encoding system, comprising:  
2 coding a foreground shape in a foreground object plane;  
3 padding a masked area in a background object plane, wherein the masked area is  
4 determined from data associated with the foreground shape; and  
5 coding the background object plane.

1 8. The method of claim 7, wherein the foreground shape is encoded with a shape-based  
2 encoding scheme.

1 9. The method of claim 7, wherein the background shape is encoded utilizing a frame-  
2 based encoding scheme.

1 10. The method of claim 7, wherein the masked area is padded with zeros when the  
2 video image comprises a P or B frame.

1 11. The method of claim 7, wherein the masked area is padded with an average pixel  
2 value of the masked area when the video image comprises an I frame.

1 12. The method of claim 7, wherein the object based coding system comprises an  
2 MPEG-4 encoder.

1 13. A program product stored on a recordable medium for encoding a video image in an  
2 object-based encoding system, comprising:

3 means for coding a foreground shape in a foreground object plane;

4 means for padding a masked area in a background object plane, wherein the  
5 masked area is determined from data associated with the foreground shape; and

6 means for coding the background object plane.

1 14. The program product of claim 13, wherein the foreground shape is encoded with a  
2 shape-based encoding scheme.

1 15. The program product of claim 13, wherein the background shape is encoded utilizing  
2 a frame-based encoding scheme.

1 16. The program product of claim 13, wherein the masked area is padded with zeros  
2 when the video image comprises a P or B frame.

1 17. The program product of claim 13, wherein the masked area is padded with an  
2 average pixel value of the masked area when the video image comprises an I frame.

1 18. The program product of claim 13, wherein the object based coding system comprises  
2 an MPEG-4 encoder.

1 19. The program product of claim 13, wherein the background plane is texture coded.

1 20. The program product of claim 13, wherein the background plane is shape coded.